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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,538	07/25/2003	Michael E. Rickey	000166.0063-US09	1153

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COVINGTON & BURLING
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1201 PENNSYLVANIA AVENUE, N.W.
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EXAMINER	
BERKO, RETFORD O	

ART UNIT	PAPER NUMBER
1615	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,538	RICKEY ET AL.	
	Examiner	Art Unit	
	Retford Berko	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/25/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement: Receipt of preliminary Amendment and Information Disclosure Statement both filed March 29, 2002 and March 8, 2004 is acknowledged.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-17 (asserting priority date of US Appl. No. 60/041,551; filed May 7, 1996) are rejected under 103(a) as unpatentable over Ramstack et al (WO 95/13799; published May 26, 1995) in view of Kino et al (US 5, 656, 299; filed May 17, 1995).

The claims are drawn toward a method for preparing microparticles of psychotherapeutic agent (risperidone or 9-hydroxyrisperidone or salts thereof) comprising enumerated five steps wherein the process involves formation of emulsion---i.e. the resultant of the mixing of the aqueous phase containing the bioactive agent and a biodegradable and biocompatible polymer in a solvent first phase (discontinuous phase) and a second aqueous phase (continuous phase), separating the two phases and removing the level of solvent in the discontinuous phase to less than 2% at 25-40 degrees centigrade. According to the claims, the biodegradable and biocompatible polymers can be polyglycolic, poly d,l-lactic, poly-l-lactic and copolymers or copolymers thereof.

The claims are also specifically directed to the use of a static mixture for the step requiring the combination of the first phase and the second phase to form the emulsion; the use of ethanol mixed with water as the solvent.

Applicant's claim limitations 1-10 are met by Ramstack et al (WO 95/13799) which disclose a process for preparing microparticles of drugs (e.g. risperidone, trenbolone and testesterone) comprising biodegradable and biocompatible polymer using emulsion technique (abstract, page 8, lin 5-10; lin 20-25; page 18, lin 20-25 and page 67, lin 25). According to Ramstack, the steps forming the microparticles are carried out at 20-60 degrees C (page 20, lin 1-5and are essentially similar to the steps in the instant claims in that in Ramstack's method, two

phased of solvent are separately prepared and mixed in a static mixer to form the microparticles (page 9, lin 15-30 and page 10, lin 20-30; continuing to page 11, lin 1-10 and page 29, lin 5), that C1-C4 alcohols are employed as solvent (page 15, lin 10-25) and that polymeric biocompatible materials employed include poly-D,L-lactic, poly-L-lactid and copolymers thereof (page 16, lin 7-25). Patent WO '799 discloses several advantages of the method for making microparticles of risperidone including (1) the microparticles having regular and irregular shapes of size 1-500 microns and can be dispensed in a constant or pulse manner into a patient thereby eliminating the need for repetitive injections 9page 29, lin 20 (2) the advantage of selecting the type of microparticle that can be designed to afford treatment to patients over a period of 30-60 days (page 13, lin 3-15).

Patent WO '799 does not specifically disclose ethanol as the solvent, the method described is not limited to specific for making resperidone or 9—hydroxyrisperidone and does not disclose the extent of removal of the residual solvent after emulsification.

Kino et al (US 5, 656, 299) disclose compositions and method for producing microspheres of anti-psychotic drugs (e.g. risperidone) using emulsification technique (abstract, col 1, lin 65 continuing to col 2, lin 15-25, lin 40-49 and col 3, lin 41-50). Patent '299 discloses the use of polylactic-co-glycolic as the polymer and residual liquid is removed by freeze-drying (col 5, lin 35-40). Patent '299 also discloses that sustained release antip-sychotic drugs prepared as microspheres in the manner disclosed in the invention can lead to considerableimprovement in the compliance of deranged persons because of the features of the invention (e.g. lowering pain resistance, application to both subcutaneous and intramuscular administration).

One of ordinary skill would have been motivated to prepare microparticles of antipsychotic drugs using the methods disclosed in the prior art cited. Though one of ordinary skill can alter the organic solvents used for making the aqueous solutions containing the bioactive agent and the polymers, this is well within the skill and experience of a skilled person working in the field. Thus, given the enumerated advantages of the methods disclosed in the prior art cited, one of ordinary skill would have expected reasonable success in obtaining anti-psychotic drugs even if she uses ethanol rather that other organic solvents to dissolve the drug and the polymers. Therefore the invention as a whole would have been prima facie obvious to one of ordinary skill at the time that it was made.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over: (a) claims 1 and 12-17 of US Patent No. 5, 792, 477. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the instant application, similar to those cited for Patent '477 are directed toward a process for the preparation of microparticles of risperidone or 9-hydroxyrisperidone

encapsulated in biocompatible and biodegradable polymers using emulsification carried out at near room temperature (b) both the instant claims and the claims in Patent '477 enumerate the same steps for making the microparticles, use the same solvent in dissolving the drug and the polymers, combine or mix the first solvent with the second solvent, separate the discontinuous phase from the first solvent phase and remove residual solvent to less than 2%/wt.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Retford Berko** whose telephone number is571-272-0590. The examiner can normally be reached on M-F from 8.00 am to 5.30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Thurman K Page**, can be reached on 571-272-0602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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